UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/371,612	08/10/1999	ERWIN HACKER	514413-3768	9453

20999 7590 09/01/2004

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
CLARDY, S	

ART UNIT	PAPER NUMBER
1616	

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/371,612	HACKER ET AL.	
	Examiner	Art Unit	
	S. Mark Clardy	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16 and 23-42* is/are pending in the application.

4a) Of the above claim(s) *16,25,29-31 and 35-37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23,24,26-28,32-34 and 38-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This action re-starts the period of response in this application. The previous final rejection is vacated and replaced by this office action. The intended final rejection was supposed to be similar to, but not identical to the first non-final action.

Claims 16, 23-37, and new claims 38-42 are pending in this application.

Note that pending claim 16 (withdrawn from consideration as being drawn to a non-elected species) is dependent on a canceled claim (14).

Applicants' claims are drawn to compositions and methods of using herbicidal compositions comprising the synergistic combination of A + B herbicides (see exceptions in the claim 23 proviso):

A) a broad spectrum herbicide

A1: glufosinate[1]
A2: glyphosate[2]
A3: imidazolinones (imazethapyr[3], imazaquin[4], imazamox[5], imazapyr[6])
A4: protoporphyrinogen oxidase (PPO) inhibitors);

B) a second herbicide, except as noted (with optional safener):

B1: trifluralin, metribuzin, clomazone, pendimethalin, metolachlor, flumetsulam, dimethenamid, alachlor, linuron, sulfentrazone, ethalfluralin, fluthiamide, norflurazone, vernolate, flumioxazin

---

[1]Excluded B herbicides: cloransulam, metolachlor, metribuzin, chlorimuron, dimethenamid, pendimethalin, bentazone, clomazone, thifensulfuron, flumichlorac, flumetsulam, linuron, sethoxydim, acifluorfen, fomesafen, sulfentrazone, flumioxazin, lactofen, fenoxaprop-P

[2]Excluded B herbicides: metolachlor, dimethenamid, metribuzin, chlorimuron, pendimethalin, bentazone, linuron, aciflurfen

[3]Excluded B herbicides: metolachlor, bentazone, clomazone, thifensulfuron, flumiclorac, pendimethalin, trifluralin, sulfentrazone, lactofen, dimethenamid, aciflurfen, fenoxaprop-P

[4]Excluded B herbicides: pendimethalin, trifluralin, metolachlor

[5]Excluded B herbicides: bentazone and trifluralin

[6]Excluded B herbicide: metolachlor

B2: chlortoluron, bentazone, thifensulfuron, oxyfluorfen, lactofen, fomesafen, flumichlorac, acifluorfen, 2,4-DB, 2,4-D, chlorimuron, diclosulam, fluthiacet, cloransulam, oxasulfuron

B3: sethoxydim, cycloxydim, clethodim
B4: quizalofop, fenoxaprop, fluazifop, haloxyfop, propaquizafop

B5: paraquat.

Again, in Paper No. 9, applicant elected with traverse of the species comprising glufosinate-ammonium[7] (A1.2). Examination has been expanded beyond the originally elected B component (cloransulam-methyl[8], B2.12) to encompass all B herbicides. In the discussion below, the parenthetical identifiers (A#.#) or (B#.#) refer to applicants' herbicide designations, e.g., glufosinate (A1.2).

Claims 16, 25, 29-31, and 35-37 remain withdrawn as being drawn to a non-elected species (A is glyphosate). Note that glufosinate is a glutamine synthetase inhibitor which interferes with the assimilation of inorganic nitrogen, while glyphosate is a 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS) inhibitor which interferes with the shikimate pathway in aromatic amino acid synthesis.

Claims 23, 24, 26-28, 32-34, and 38-42 have been examined only insofar as they read on the elected species (glufosinate + B herbicides).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

---

[7]Ammonium 2-amino-4-(hydroxymethylphosphinyl)butanoate

[8] 3-chloro-2-[[(5-ethoxy-7-fluoro[1,2,4]triazolo[1,5c]pyrimidin-2-yl)sulfonyl]amino]benzoic acid

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 23, 24, 27, 28, 38, 39, 41, and 42 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Lee et al (US 6,586,367).

Lee et al teach the herbicidal utility of the combination of phospho-herbicides such as glufosinate (and the non-elected glyphosate) with synergistic amounts of an additional herbicidal agents (abstract). For use in glufosinate or glyphosate resistant soybean, the glyphosate/glufosinate component is combined with a synergistic amount of an additional herbicide selected from metolachlor (and its S-enantiomer), fluthiacet-methyl, and oxasulfuron (first and third structures in the abstract, and column 7, lines 11-55), among others as previously noted (and added into the proviso statement), in crops (col 7, lines 11-55).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 23, 24, 26-28, 32-34, and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (cited above). Lee et al teach the combination of glufosinate with herbicides within applicants' B classes (i.e., B2 herbicides fluthiacet and oxasulfuron). It would have been within the skill level of the ordinary artisan to select additional related herbicides to combine with glufosinate for the control of weeds in crops such as soybeans. Further, it is *prima*

facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 205 USPQ 1069. One of ordinary skill in the art would have the requisite skill to select appropriate secondary herbicides based upon the known herbicidal spectrum of activity of the second herbicide to enhance the herbicidal utility of the combination.

Applicants argue that there are no synergistic results provided in Lee et al, and that the disclosure of Lee et al is insufficient to render the claimed invention obvious because it would require an inordinate amount of testing in order to select specific combinations of herbicides as disclosed within Lee et al that are actually synergistic. While Lee et al lacks biological examples drawn to the specific combination claimed herein, this patent nevertheless discloses synergistic compositions comprising either glufosinate or glyphosate in synergistic combination with a limited group of second herbicides: metolachlor, fluthiacet, or oxasulfuron. This does not appear to be such an extensive list of possibilities as to require an inordinate amount of testing. Further, the limited nature of the disclosure appears to make the obviousness rejection unnecessary in view a disclosure that could arguably be termed clear anticipation.

In view of the assertion of synergism for the limited herbicidal combinations as discussed in Lee et al (col 7, lines 11-15+), it would appear that data demonstrating synergistic results for glufosinate combinations would be expected from the prior art.

No claim is allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Mark Clardy
Primary Examiner
Art Unit 1616

August 30, 2004